

ABSTRACT

An ultrasonic dissection and coagulation system for surgical use is provided. The system includes an ultrasonic instrument, a control module, and a remote actuator. The ultrasonic instrument has a housing and an elongated body portion extending from the housing. An ultrasonic transducer supported within the housing is operatively connected to a cutting jaw by a vibration coupler. The vibration coupler conducts high frequency vibration from the ultrasonic transducer to the cutting jaw. The cutting jaw has a blade surface which is curved downwardly and outwardly in the distal direction with respect to the longitudinal axis of the elongated body portion along its length such that an angle defined by a line drawn tangent to the blade surface and the longitudinal axis of the elongated body portion varies between 5 degrees and 75 degrees. A clamp member having a tissue contact surface is positioned adjacent to the cutting jaw and is movable from an open position in which the tissue contact surface is spaced from the blade surface to a clamped position in which the tissue contact surface is in close juxtaposed alignment with the blade surface to clamp tissue therebetween. The clamp member and the curved cutting jaw combine to enhance contact between tissue and the blade surface of the cutting jaw during cutting. Further, the continuously varying angle of the blade surface with respect to the longitudinal axis of the elongated body portion facilitates selective user control over the application of force on tissue during a cutting or dissecting procedure.